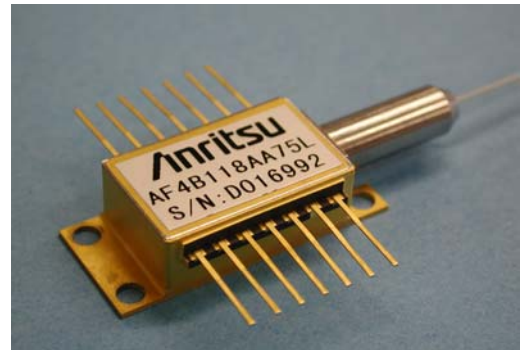


1.48 μ m LD Module AF4B SERIES type A Optical output power 120mW ~ 180mW

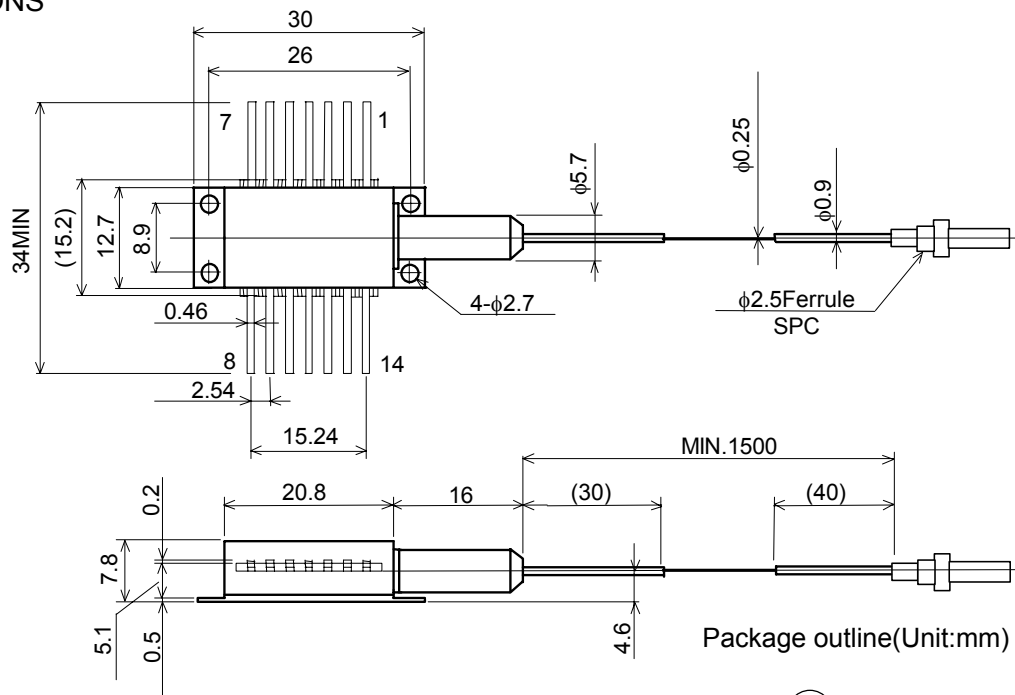
The AF4B SERIES type A is 1.48 μ m high power laser diode modules designed for Er doped fiber amplifier. The laser is packaged in a 14-pin butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

FEATURES

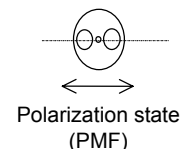
- ◆ Optical output :
 - 120mW ($I_F \leq 500\text{mA}$) AF4B112AA75L / AF4B112AD75L
 - 140mW ($I_F \leq 550\text{mA}$) AF4B114AA75L / AF4B114AD75L
 - 160mW ($I_F \leq 600\text{mA}$) AF4B116AA75L / AF4B116AD75L
 - 180mW ($I_F \leq 600\text{mA}$) AF4B118AA75L / AF4B118AD75L
- ◆ Fiber
 - SMF output (UV coating fiber: $\phi 0.25\text{mm}$)
 - PMF output (UV coating fiber: $\phi 0.25\text{mm}$)
- ◆ 14pin butterfly package
- ◆ Built-in optical isolator
- ◆ Internal monitor PD and TEC
- ◆ Operating case Temperature 75 $^{\circ}\text{C}$



DIMENSIONS



(Note) Polarization state of LD is aligned parallel to the slow axis.

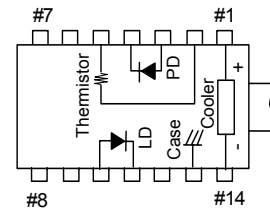


■ ABSOLUTE MAXIMUM RATINGS (T_{LD}=25°C)

Item	Symbol	Rating	Unit
LD Forward Current	IF	1100	mA
LD Reverse Voltage	VR	2	V
PD Forward Current	IFD	10	mA
PD Reverse Voltage	VRD	20	V
Operating Case temperature	T _C	-20 to +75	°C
Storage Temperature	T _{stg}	-40 to +85	°C
Cooler Current	IC	2	A

* Excess over the absolute maximum ratings may lead to damage.

■ TOP VIEW



■ Pin Configuration

No	FUNCTION	No	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	PD anode	10	LD anode
4	PD cathode	11	LD cathode
5	thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler cathode

■ OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{LD}=25°C, T_C=25°C)

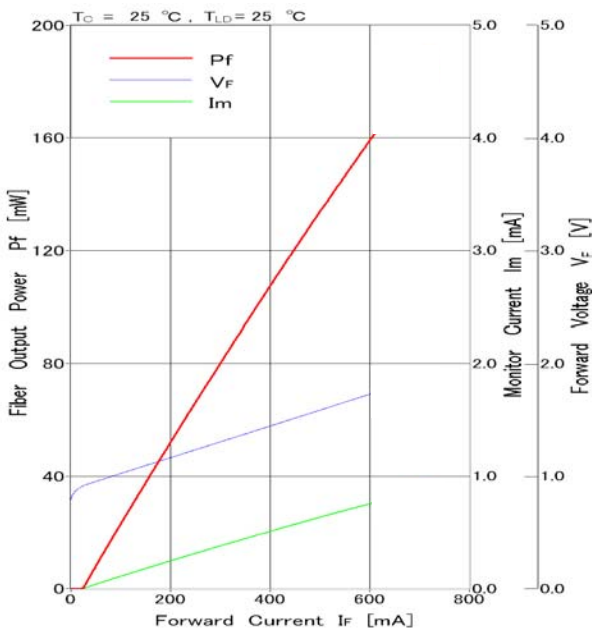
Item	Symbol	Test condition		AF4B112AA75L	AF4B114AA75L	AF4B116AA75L	AF4B118AA75L	Unit
				AF4B112AD75L	AF4B114AD75L	AF4B116AD75L	AF4B118AD75L	
Output power	Pf			120	140	160	180	mW
Forward Voltage	V _F	At Output Power	Max.	2.5				V
Threshold Current	I _{th}		Max.	50				mA
Forward Current (BOL)	IF	At Output Power	Max.	500	550	600		mA
Center Wavelength	λ _c	At Output Power	Min.	1460				nm
			Typ.	1475				
			Max.	1490				
Spectral width	Δλ	At Output Power RMS (-20dB)	Typ.	4				nm
			Max.	8				
Monitor Current	I _m	At Output Power VRD=5V	Min.	100				μA
			Typ.	400				
			Max.	800				
PD Dark Current	I _d	VRD=5V	Max.	0.1				μA
Tracking Error	ΔPf	I _m =const, T _c =-20~75°C	Max.	0.5				dB
Cooler Voltage	V _c	IF=*EOL, T _c =75°C	Max.	3.5				V
Cooler Current	I _c	IF=*EOL, T _c =75°C	Max.	1.2	1.4			A
Thermistor Resistance	R _{th}	T _{LD} =25°C B=3900±100K	Min.	9.5				KΩ
			Typ.	10				
			Max.	10.5				
Optical Isolation	R _o	T _{LD} =25°C	Typ.	30				dB

*EOL=BOL × 1.2

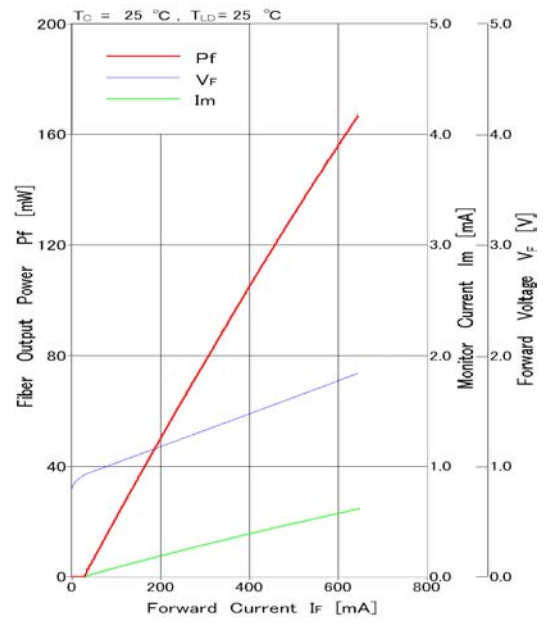
AF4B SERIES type A TYPICAL CHARACTERISTICS

◆ Fiber output power / Monitor Current / Voltage-Forward current characteristics

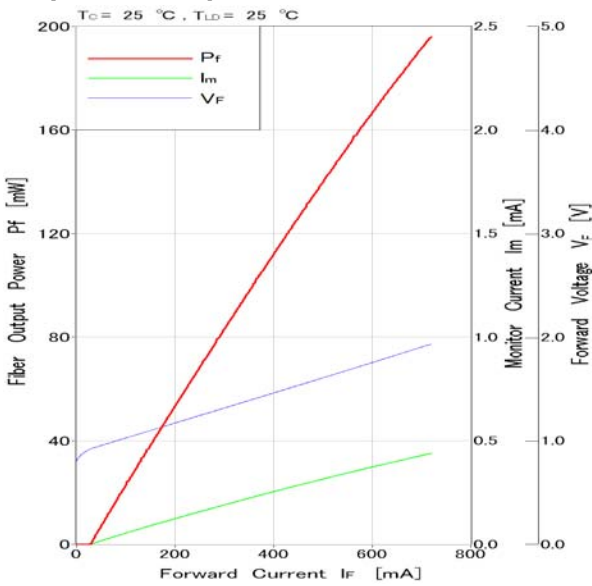
[AF4B112AA75L]



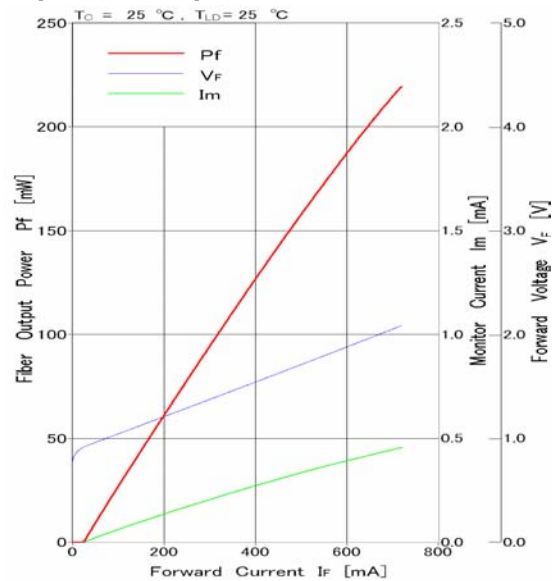
[AF4B114AA75L]



[AF4B116AA75L]

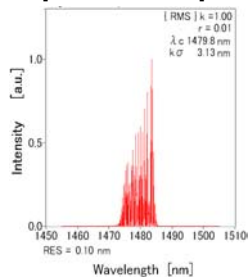


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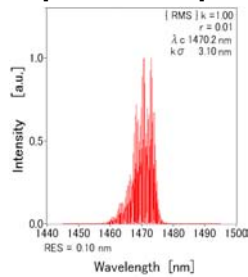


◆ EMISSION SPECTRUM

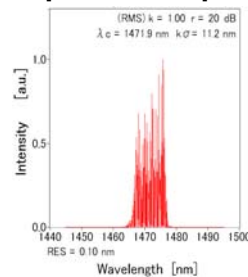
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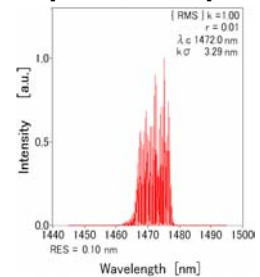
[AF4B114AA75L]



[AF4B116AA75L]



[AF4B118AA75L]



ORDERING INFORMATION

MODEL : AF4B1 # # A # # # #

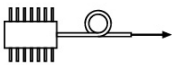
◆ Center Wavelength range
L:±15nm M:±20nm K:±10nm

◆ Center Wavelength
75:1475nm 80:1480nm
70:1470nm 65:1465nm

◆ Fiber and connector
A:SMF Ferrule D:PMF Ferrule
G:SMF FC/PC K:PMF FC/PC

◆ Optical output power
12:120mW 14:140mW
16:160mW 18:180mW

SEMICONDUCTOR LASER



AVOID EXPOSURE
Invisible laser radiation is emitted
from this aperture



INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM
OUTPUT POWER 500mW
WAVELENGTH: 1.40 to 1.50 μm
CLASS IIIb LASER PRODUCT

Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
This Product Complies with 21 CFR 1040.10 and 1040.11
Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan

Anritsu Corporation reserves the right to change the design or specification of the product at any time without notice.

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